

Solid Waste Plan Working Group DRAFT Market Development Subcommittee Report

- **Market Development Defined**

Market Development – the committee sought to define “Market Development” in the framework of Solid Waste Management. It was agreed that in this context, Market Development would be considered activities that provided or stimulated the demand for materials diverted from the waste stream or the utilization of material(s) that would have otherwise been disposed of as solid waste. The U.S. EPA Jobs Through Recycling (JTR) Website defines recycling market development as “... fostering businesses that manufacture and market recycled-content products and strengthening consumer demand for those products.”¹

- **Economic Considerations & Markets**

The impact of national and global economic conditions and their ancillary impact on markets for the subcommittee, and China’s role as a primary market for fiber and steel explored recovered materials were recognized. An April Wall Street Journal Article identified that China is currently the largest market for U.S. Scrap exports, accounting for 23% or \$1.2 billion in 2002. According to the RI Export Assistance Center, scrap and waste was Rhode Island’s second largest export category in 2002, for a total value of \$144,787,758. Two market segments were singled out for discussion by the subcommittee.

- *Fiber Market*

The international nature of fiber markets was evidenced by factors such as the detrimental effect that the SARS epidemic had on the fiber market and United Paper Stock’s ability to market its product. The subcommittee agreed that fundamental to all market development efforts was a strong global economy, and that this would create demand for secondary fiber and other materials. Currently more than 80% of all paper mills in the U.S. use recovered paper to make their products, and nearly 200 mills use exclusively recovered paper.

The American Forest and Paper Association (AFPA) has set a recovery goal of 55% for all paper consumed in the U.S. by 2012. However, if domestic and export demand for recovered paper grows, the paper industry runs the risk of seeing existing paper and paperboard capacity idled due to insufficient supply.

The use of Flexographic Ink by the Providence Journal and the marketing limitations created for newsprint processed at the RI Materials Recovery Facility (MRF) was discussed by the subcommittee. It was concluded that the Journal’s switch to this ink type has positive environmental benefits with respect to effluents. Unfortunately a number of recycled paper mills are not equipped to de-ink newsprint with Flexographic ink, and therefore not available as market for RI newsprint which is estimated to contain as much as 75 - 80% Flexographic-inked

¹ <http://www.epa.gov/jtr/faq/index.htm#econ-2>

newsprint from the Providence Journal. (This 'guesstimate' should be verified).

➤ *Plastics Market*

The potential for Market Development for post-consumer plastic bottles in RI was discussed. Committee members indicated that the entire annual volume of plastic bottles currently recovered from the waste stream and processed at the Materials Recycling Facility would not provide sufficient feedstock of either #1 High Density Polyethylene (HDPE) or #2 Polyethylene Terephthalate (PET) for a typical Plastics reclaimer or processor were a new facility to be sited in RI. Additional material from out of state would have to be imported to supplement material from the MRF if a plant were sited here.

Additionally, there are structural issues affecting the Plastic Markets. According to the National Association for Plastic Container Recovery, reclamation capacity significantly exceeds supply of recovered bottles. In 2001, 834mm lbs. of post-consumer bottles were purchased. As of May 2003, U.S. PET reclamation capacity was 946mm lbs.

- **Federal Market Development Effort – EPA “Jobs Through Recycling Program”**

The EPA's Jobs Through Recycling initiative was referenced in the previous edition of the Comprehensive plan. JTR was established in 1994 with the goal of stimulating the development of businesses that:

- Utilize recovered materials that would otherwise be landfilled or incinerated; and
- Contribute to economic growth and create/retain jobs.

EPA's Jobs Through Recycling initiative puts the tools of business development—technology transfer, financing, and marketing—into the hands of recycling professionals. JTR facilitates cooperation and communication among solid waste officials, economic development organizations, and businesses involved in collecting, processing, and remanufacturing recovered materials. In achieving these results, JTR projects ranged from conducting composting demonstration projects in rural communities to organizing financing meetings with venture capitalists and other potential investors.

From 1994 to 1999, the JTR program offered a variety of grants to strengthen recycling market development and economic development programs. In addition, the program developed and distributed market development information and facilitated the networking of recycling market development officials. Through information sharing, JTR continues to support an active network of state and regional contacts who develop innovative programs and provide useful information to recyclers and related businesses.²

² <http://www.epa.gov/jtr/faq/index.htm#gen-1>

The JTR program provided "seed funding" of \$8 million to numerous states, tribes, and multistate organizations between 1994 and 1999. This funding has helped create more than 8,500 jobs, generate \$640.5 million in capital investment, create 15.3 million tons of capacity, and utilize 13.9 million tons of recovered materials. One job has been created for every \$1,040 of JTR grant money invested.³

In 1995, the program had \$1.5 million available to fund regional (Region 1) programs. RI DEM received \$236,000 to fund an Electronics disassembly and recycling operation. The project was to be a public-private partnership with the German company Hetzel. However, the project was not brought to fruition.

JTR funding situation in 2003 is considerably different than in 1995. The program has a budget of only \$20,000 for each EPA region. As such, JTR's focus has shifted to "Fostering recycling market development by facilitating information exchange and providing networking opportunities." JTR does this through various means including:

1. National Market Development Roundtables: The JTR Roundtables are forums for market development officials to learn about current market development challenges and opportunities; gain knowledge about recent trends and issues facing various commodities; share expertise and information about best practices with other experts in the market development arena; and network with other market development professionals.⁴
2. Information Sharing: One of the objectives of JTR is to promote information exchange among recycling market development professionals across the country. As part of this effort, the JTR program has developed the following resources/publications for states and organizations:
 - JTRnet List serve & Archive - An email list serve & archive of market development information and tips from the JTRnet list server.⁵
3. Publications:
 - "MarketShare" - A collection of effective market development strategies used by JTR grantees.⁶
 - "JTR Success Stories" - A series of fact sheets documenting the success of JTR funded projects⁷.

EPA Recycling Economic Impact Study(s): The recycling and reuse industry is a significant force in the United States economy. The purpose of the EPA Recycling Economic Impact (REI) Study was to quantify the industry's contributions to job creation and economic prosperity. The first EPA REI Study, completed and released in July 2001, documented approximately 56,000 establishments that employ over 1.1 million

³ <http://www.epa.gov/jtr/econ/grantres.htm>

⁴ <http://www.epa.gov/jtr/about/nround.htm>

⁵ <http://www.epa.gov/jtr/jtrnet/index.htm>

⁶ <http://www.epa.gov/jtr/docs/mrktshr.pdf>

⁷ <http://www.epa.gov/jtr/about/success.htm>

people, generate an annual payroll of nearly \$37 billion, and gross over \$236 billion annually. (See APPENDIX 2 for more information)

The study, commissioned by EPA in cooperation with 17 states and the National Recycling Coalition, identified 26 different types of recycling organizations, drawing from economic census and survey data. Since its release, EPA and states have promoted the REI results to public and private lenders, elected officials, and economic development agencies at state, regional and national events.⁸ To date, over 20 states have released reports documenting the size of the recycling and reuse industries within their jurisdictions.

Though the report was released in 2001, much of the data on which the results are based dates back to 1997. The purpose of this proposal is to initiate the planning stage of a second REI study.

In addition to the national REI study, numerous states assessed the economic impact of recycling and reuse in their state.⁹ A Northeast regional study was also conducted by the Northeast Recycling Council, providing detailed analyses for that region of the country.¹⁰

REI II Proposal: EPA plans to partner with other Federal agencies as well as state and regional market development officials through its Jobs Through Recycling Program to develop a second study. EPA plans to meet with staff at the federal Commerce and Labor Departments to discuss partnering opportunities for the second study.

The following tasks (w/ timeframe) are proposed for the project:

- Establish a partnership among state, regional and national organizations to work on the project (FY03)
- Conduct a scoping study to evaluate methodology, results and lessons learned from the initial study (FY03)
- Develop a comprehensive work plan and obtain financing to implement the second study (FY04)
- Obtain data, conduct economic modeling and analysis (FY05-05)
- Prepare a final report and implement outreach strategy (FY06)

• **Regional Efforts / Northeast Recycling Council**

The committee agreed that the size of Rhode Island and the nature of its economy present inherent limits to the potential scope of a formalized Recycling Market Development program. An alternative would be to support what is being done regionally in this area by the Northeast Recycling Council (NERC). NERC is a regional organization working directly with the state agencies of the 10 member states. NERC is

⁸ The full report is available at www.epa.gov/jtr/rei

⁹ <http://www.epa.gov/jtr/econ/rei-rw/efforts.htm>

¹⁰ <http://www.nerc.org/projects.html#cu3>

unique in the Northeast, in that it is the only forum for cooperative research, collaborative action, and networking on regulatory, market and business development issues that link recycling and economic development.

Recycling Business Financing Seminar: In 2001, RIRRC partnered with NERC, EDC, The US Small Business Association (SBA), the Small Business Development Center (SBDC) and Fleet Financial Services to sponsor a Recycling Business Financing Seminar. The seminar was designed to assist those that work with small businesses to better understand the recycling industry, how recycling enterprises add value to the state's economy, and how recycling companies operate.

The goal of the training provided by the seminar was to assist the attending bankers, attorneys, accountants, economic developers and non-profit organizations to maximize their effectiveness when assisting recycling entrepreneurs with developing their business plans and obtaining necessary financing. The Seminar was held in June at Bryant College in Smithfield, and featured several excellent presentations. However, attendance at the seminar was limited, despite free attendance (made possible through sponsorships) and concerted marketing and promotion efforts by the sponsoring organizations.

Newspaper Recycled Content Law: In 1991, the Rhode Island General Assembly passed Rhode Island General Law 23-18.16 requiring all publishers to purchase a minimum of forty percent (40%) post-consumer material for their publications annually by the year 2001. Beginning in 1997 NERC spearheaded a ten state collaborative effort to expand the use of recycled content newsprint region. Concern about meeting state-established recycled content goals of 40% prompted publishers in several Northeast states to urge a reassessment of the goals. The lack of new investments in recycling capacity by manufacturers supplying finished newsprint to the region since 1995 was at the root of their concern. In recognition of this fact, state-recycling officials and publishers in the Northeast agreed to establish the Northeast Newspaper Recycling Task Force to determine whether out-year goals were attainable.

NERC, with its history of monitoring the availability of recycled newsprint in the region and of maintaining a dialogue between publishers and states, was chosen to organize and lead this effort. NERC entered into a dialogue with publishers in the region and with partial funding from the U.S. EPA established the Northeast Newspaper Recycling Task Force, comprised of NERC members and some of the region's large publishers. Members of the Task Force funded a study of recycled newsprint manufacturing capacity.

The objective of this new approach was to drive additional investments in, and maximum utilization of, recycled-fiber based manufacturing capacity by the North American newsprint industry, thereby sustaining the economics of old newspaper recycling in the Northeast. The Task Force worked throughout 1998 to develop a new regional policy affecting Northeast publishers' purchases of recycled-content newsprint. The Task Force's Final Report and recommendations were published

in January 1999. (The full Task Force report and resolution can be viewed on the NERC web site¹¹.)

In 1999, NERC states adopted a regional policy because:

- A regional policy and reporting system better reflects the regional nature of the industry and markets (e.g., newspaper publishers buy newsprint and sell papers regionally, without regard for state boundaries; and newsprint manufacturers and old newspaper recycling firms operate in regional markets.)
- A regional approach promotes more uniformity of goals, and provides an opportunity to include publishers in New Jersey and Delaware where “buy recycled” newsprint agreements or laws are not currently in place.
- By acting in concert, publishers and states send a stronger market signal to newsprint manufacturers that recycled-content newsprint is the preferred product in the marketplace.

Under this new approach, large newspapers and newspaper groups selling into the region were asked to endorse a resolution committing them to purchase newsprint containing a minimum level of recycled fiber content newsprint annually. This minimum level, or floor, would be based on the purchase of recycled fibers and would have to average at least 27 percent of total fiber purchases each year.

Once endorsements were received committing 80% of the regional annual tonnage of newsprint to the goal of achieving an average 27% recycled content rate, the full implementation period would begin. At that time NERC staff would be responsible for tracking publishers' annual recycled-content purchases, including administering surveys, and compiling and reporting results. State publisher associations and the Newspaper Association of America would assist NERC in coordinating this effort.

Thanks to the efforts of the Newspaper Association of America, As of July 27, 2001 this long desired goal has been achieved. As of that date 86% of the annual newsprint consumption in the region has endorsed the agreement. Thus, the monitoring and evaluation period now begins. Letters have been sent to each of the signatory publishers asking for baseline data for average recycled content in calendar year 2000.

The Publishers who have committed to the recycled content goal and annual reported are:

- [Bangor Daily News](#),
- [Dow Jones](#),
- [Gannett](#),

¹¹ www.NERC.org

- [Journal Register](#) (Rhode Island publications include The Woonsocket Call, The Pawtucket Times, Neighbors, The Narragansett Times, The Standard Times, The East Greenwich Pendulum, The Chariho Times, The Coventry Courier, The Westerly Shopper, Rhode Island Family, This Week in South County, Pawtuxet Valley Business/Chamber News, Great Outdoors, Kent County Daily Times, The Peddler, Spectator, Cranston Monthly, Narragansett Indian News)
- [Knight Ridder](#),
- [Massachusetts Newspapers](#),
- [Media News](#),
- [New York Times](#),
- [New Jersey Media Group](#) [www.northjersey.com]
- [Providence Journal](#),
- [The Star Ledger](#)
- [Syracuse Papers](#), and
- [Tribune Publishing](#).

Tribune Publishing owns:

- Newsday (New York),
- The Advocate (Stamford, CT),
- Greenwich Times,
- The Hartford Courant,
- The Free Press (Quakertown, PA), and
- Morning Call (Allentown, PA).

Calendar 2001		
Total Metric Tons Newsprint Purchased	Tons Recycled Newsprint Fiber	Percent Recycled Fiber of Total Newsprint
1,529,783	440,790	28.8%

RI abstained from the NERC vote on the resolution for the agreement because of the inconsistencies in recycled content targets. DEM is currently compiling a report for the General Assembly. The Department may recommend amendments to the Rhode Island statute that will mirror the NERC newspaper publishers' agreement due to of the regional nature of the industry and because they lack the resources to oversee a state program.¹²

A compendium of other completed and current NERC market development projects can be found on their web site.¹³

• States' Programs

¹² Contact Terri Bisson for more information.

¹³ <http://www.nerc.org/>

The committee reviewed a survey of other states' Market Development Programs (APPENDIX 3). The survey is not comprehensive but illustrates the diversity in the size and scope of these programs. Some states have no formalized program, and others have organized programs with a diverse range of staffing and funding levels. The California Integrated Waste Management Board (CIWMB) maintains the nation's largest Recycling Market Development program with a staff of 70 and a budget of \$7,000,000 (2002). The CIWMB manages a low-interest loan program that has funded over 113 loans totaling more than \$60 million since 1993. CIWMB also administers the Recycling Market Development Zone Program that provides financial and technical assistance to recycling businesses.¹⁴ See the CIWMB web site for information.¹⁵

- **Priority Materials**¹⁶

There is a high degree of consistency among the states with market development programs in terms of their top priority materials for market development. The top three materials are:

1. Electronics
2. Organics/Food Wastes
3. Construction and Demolition Debris

Several states are also targeting additional materials as second-tier priorities. These materials include

1. Carpet
2. Plastics
3. Tires

While states are continuing to expend some market development resources on traditional curbside recyclables, there is a notable reduction in the scope of programs targeting these materials.

- **Market Development Strategies for Priority Materials**¹⁷

States are continuing to implement a variety of approaches to fostering markets for recyclable materials. Following is a summary of the menu of market development strategies currently being employed by state governments.

Product Stewardship/Extended Product Responsibility: Product Stewardship and Extended Product Responsibility are the newest and, perceived by many states, to be the most promising market development approach. While few states have formal PS or EPR policies, programs or laws, several are pursuing dialogues with industry segments to leverage voluntary commitments to design products for recyclability and the

¹⁴ Contact John Smith jsmith@ciwmb.ca.gov for more information

¹⁵ <http://www.ciwmb.ca.gov/Markets/>

¹⁶ Michael Alexander, National Recycling Coalition

¹⁷ Ibid.

environment, and to more fully share in the management and costs of the recovery and recycling infrastructure.

(PS or EPR initiatives have been addressed in detail the Source Reduction/Waste Prevention Subcommittee report).

Grants and loans: Specialized grant and loans programs for recycling businesses have traditionally been a core market development approach used by many states, particularly populous states with large recycling and solid waste budgets and staffs. These programs continue to be a primary tool, however, funding is not available at the levels or for the wide-range of projects as was the case 7-10 years ago. States are now more closely linking the types of projects funded with overall solid waste management priorities, and conducting more thorough due-diligence to ensure that projects selected for funding achieve projected results.

Environmentally preferable purchasing and buy recycled: Buy recycled, and more recently “EPP” programs, have also been a common approach used by states market developers over the last ten years. Notably, traditional buy recycled initiatives are now being broaden to encompass environmentally preferable criteria that capture full life cycle impacts associated with products. These programs have also expanded beyond paper and other standard recyclables, and are now moving to new frontiers such as electronics and green building materials. In addition, states environmental agencies are continuing to look for ways to broaden the public sector organizations with buy recycled and EPP programs to include other agencies such as DOTs and Parks and Recreation, as well as local governments.

(EPP initiatives have been addressed in the Source Reduction/Waste Prevention Subcommittee report).

Linking Economic Development and Recycling Market Development: Several states have institutionalized linkages between their recycling market development and economic development agencies. For instance, several states applied seed funding from EPA’s JTR grants program to hire recycling market development staff within the department of economic development. A number of states have made these positions permanent.

Providing Targeted Assistance to Recycling Enterprises: In addition to, or in the place of, direct financial assistance states are providing recycling enterprises with a range of resources, including business plan development, technical assistance and identifying alternative sources of financing. Since these types of assistance are not typically found within environmental protection agencies, the states are developing partnerships with other agencies and organizations to deliver the services, including manufacturing extensions, SBDCs, and regional multi-state organizations.

For more in-depth information on top priority materials and market development approaches, see accompanying bibliography of web-based resources (APPENDIX 2).

- **Massachusetts Market Development Center Model – Chelsea Center**

The committee discussed The Chelsea Center for Environmental and Economic Development in Massachusetts as a potential model for Rhode Island. The state of Massachusetts in Partnership with the University Massachusetts launched the Chelsea Center for Recycling and Economic Development in 1995 to create jobs, support recycling efforts, and help the economy and the environment by working to increase the use of recyclables by manufacturers.

The Chelsea Center was part of the University of Massachusetts. It was formed through the Strategic Technology Partnership (STEP) Program, a partnership between the University of Massachusetts, the state Executive Office of Environmental Affairs, and the Massachusetts Office of Business Development. Funding comes primarily from the STEP Program and the Clean Environment Fund (CEF). The CEF is comprised of unredeemed bottle deposits, and is managed by the Executive Office of Environmental Affairs. Although a successful program, the Chelsea Center was disbanded on June 30th 2003. Information on the program can be found on the Chelsea Center web site www.chelseacenter.org, which is still accessible.

- **Pennsylvania – Consultant Research for Market Development Center**

The subcommittee determined that a potential recommendation might be for a consultant to explore the potential for market development in Rhode Island. Following this determination, the work done by consultant RW Beck for Pennsylvania was obtained and reviewed by the subcommittee. It was subsequently decided by the subcommittee to use this project as an example of how Rhode Island might proceed were it to engage a consultant.

The State of Pennsylvania's context for market development differs markedly from that of Rhode Island in that there are recycling end-markets within the state. Pennsylvania hired the consultant R.W. Beck to assist with the development of a Market Development Program and Center, and what approach should be taken by the state. RW Beck's principal hypothesis for its work was the following:

Given the nature of the U.S. and global economy, the marketplace is the primary, and preferred, mechanism for allocating resources (e.g., secondary materials, recycled products, labor, capital, and equipment). The role of state government in promoting market development is to identify and address inefficiencies in the marketplace.¹⁸

Through its work for the State of Pennsylvania, RW Beck produced the following reports¹⁹:

1. Recyclable Materials Supply and Demand Workpaper; Pennsylvania Markets Center Study – October, 2002
2. Strengths, Weaknesses, Barriers and Opportunities Workpaper – November, 2002

¹⁸ http://www.dep.state.pa.us/dep/deputate/airwaste/wm/recycle/Market/docs/Phase_II_Principles_of_Approach.pdf

¹⁹ <http://www.dep.state.pa.us/dep/deputate/airwaste/wm/recycle/Market/docs/studies.htm>

3. Markets Center Study Organizations Workpaper – February, 2003
4. Final Report, Recycling Market Center Study - Phase I – February, 2003
5. Principles of Approach - The Role of State Government in Recycling Market Development – May 2003

The RW Beck project consisted of two phases:

1. Phase 1 was all five of the above reports that have been done to date.
2. Phase 2 includes the Strategic Plan and the business and implementation plans for the Market Development Center. The business plan for the operation of a Pennsylvania market development center is expected to be released this fall.

Pennsylvania DEP has offered to provide a copy of the RFP issued for this project to Rhode Island.²⁰ Pennsylvania's budget for Phase I and Phase II of the RW Beck project is \$247,128 and thus far they are under budget.

- **Existing RI Market Development Initiatives**

Despite the State not having a formalized Market Development program, there are several market development related initiatives currently being supported by RIRRC.

1. Alkahest prototype mollusk shell recycling system - In 2002, RIRRC provided a grant for the development of a process to process to clean, sanitize and recycle clam shells, to construct an integrated prototype system for processing over 2000 pounds of shells per hour.
2. Recycling for RI Education – Annually since 1998, RIRRC has provided grants to fund the continued operations of Recycling for the RI Education (RRIE) 'Recycle Center'. RRIE diverts clean, non-toxic materials from manufacturers for use by RI educators with their children.
3. Southern New England Materials Exchange (SNEME) – In May of 2003 RIRRC provided a grant to the RI Export Assistance Center to develop and implement a new web-based Business Materials Exchange. The exchange would link business generating 'waste' materials with organizations that can utilize the materials.
4. Residential Internet-based Reuse Exchange – In July 2003 RIRRC awarded a contract to Eureka Recycling of St. Paul MN to implement the RI "Free Market." The Free Market will link individuals seeking used household-related items with those interested in giving away those items.

- **Potential Initiatives**

²⁰ Georgia Kagle ,PA DEP: 717 787-7382 or gkagle@state.pa.us

1. Marine BioConversion (MBC) squid waste utilization project - With financial assistance from the Slater Center for Environmental Biotechnology, MBC has been working on converting squid processing wastes that are currently landfilled or barged out for ocean dumping into high value specialty aquaculture feed ingredients and seafood flavors. MBC is seeking additional funding to prove that this "Bioconversion" can be a viable approach to solving the waste disposal problems while simultaneously gaining economic return.²¹
2. Glass Cullet – Applications for Glass cullet such as aggregate could offer alternatives to use as a supplement to Alternate Daily Cover. Whether or not this would be necessary will depend on the volume of cullet generated by the MRF and the capacity of Recovermat to utilize all the cullet available. At least one municipality has expressed interest in utilizing glass cullet as aggregate in construction projects.
3. RIRRC Industrial Park – Planning underway for the construction of an industrial park adjacent to RIRRC facilities could potentially site firms whose business involved recovering materials from the waste stream and processing recovered materials to create value-added products.

- **Other Items reviewed by the Subcommittee**

Recycled Rubber Roads Act of 2003 – Senator Jeff Bingaman (D-NM) has introduced the Recycled Roads Act of 2003. The act is similar to the rubber roads provision that the Institute of Scrap Recycling (ISRI)²² has been attempting to insert into the omnibus highway bill, TEA 21. The bill would establish a program to increase the use of recyclable material in the construction of Federal-aid highways.

ISRI Staff and members of the ISRI Tire Division are working with Bingaman's office and members of the Senate Environment and Public Works Committee to move this effort forward. The ultimate goal is to insert a provision into the research section of TEA 21. The provision would not be mandatory, and would not come out of any state's share of highway funds. It would provide grants for education of contractors and state engineers, etc.²³

The subcommittee also agreed that two items identified in the previous comprehensive plan should be reevaluated and potentially revived:

1. Local Recycling Markets List – DEM used to maintain a list of businesses throughout the region that accepted materials for recycling. The list of potential markets would be helpful to companies generating recyclable materials and seeking to divert these materials from their waste stream. This function could potentially be served by the SNEME and should be explored by RIRRC as it proceeds with this project.

²¹ Marine BioConversion Slater Center for Environmental Biotechnology Final Report (Phase 1) - Bioconversion of Seafood Processing Wastes into Specialty Aquaculture Feed Ingredients and Seafood Flavors.

²² <http://www.isri.org/>

²³ Contact Mark Reiter - 202/662-8517 or at markreiter@isri.org.

2. Recycled Products Directory – In 1997 DEM produced a directory of recycled products available targeted at municipal purchasing officials. However, the directory needs to be updated and DEM does not possess the resources to do so at this time. National information on recycled plastic products (and markets) is available on the American Plastics Council's Plastic Resource web site.²⁴

Conclusion

Fundamental to the context of Market Development in Rhode Island is the consideration of the state's size. None of the materials processed at the MRF are shipped to end-markets within the state with the exception of scrap metal. In addition, there is currently no State Agency or Department focusing on Recycling Market Development. Given funding and staff limitations, DEM has not continued pursuing market development initiatives that were initiated in the 1990s. A program could potentially be operated by RIRRC, Economic Development Corporation or another entity such as the URI Center for Pollution Prevention.

In addition, instituting a Market Development program would likely require legislative action or a mandate from the Governor to an agency. The Committee discussed what potential funding sources might be including the hard-to-dispose advance disposal fee; tip fee surcharge, or beverage container deposits. Several of these revenue sources are utilized to fund programs in other states. However, their applicability and potential applications in Rhode Island appears remote at this time.

No conclusion was reached by the subcommittee on a viable funding source for a Market Development program in RI given the current state/agency budget situation. The dearth of an available/identifiable funding source remains a significant obstacle to the creation of a formalized Market Development program.

²⁴ <http://www.plasticsresource.com/>

Solid Waste Plan Working Group
DRAFT Market Development Subcommittee Report – Appendices

APPENDIX 1
About the REI Study¹

Comprehensive, national data on the economic impact of recycling and reuse is critical to the continued growth and success of the industry. With the release of the *U.S. Recycling Economic Information Study*, for the first time, public and private sector decision-makers now have a clear picture of the significant contribution recycling makes to our nation's economy. The study:

- Demonstrates to the investment community that recycling is a viable, established industry with a proven track record.
- Assists government agencies with strategic planning and policy decisions to ensure the continued growth of the industry.
- Identifies business opportunities for entrepreneurs based on emerging commodity areas and industry sectors.
- Provides recycling and reuse advocates with an important tool to help promote awareness and build support.

The multi-year REI project utilizes the best available data from 1997-1999. The national study was accomplished through a comprehensive analysis of both existing economic data and reasonable estimates based on targeted surveys of recycling businesses and sophisticated economic modeling. The study allows for sound economic comparisons across different regions and states in the country and establishes an important benchmark of the economic impact of recycling and reuse.

The study calculated three main types of data:

Direct Economic Impacts

The study evaluates economic data for 26 different types of reuse and recycling establishments—from local thrift stores to major paper recycling companies. The study measures several different industry characteristics including the number of establishments, total jobs, annual payroll, annual receipts, and annual throughput (amount of materials collected and processed).

Indirect and Induced Economic Benefits

This includes the professional services (e.g., accounting firms, office supply companies) used by recycling and reuse organizations (or "indirect" impacts) and the money spent by the people who work in the recycling and reuse industry (or "induced" impacts).

Federal, State, and Local Tax Revenues

This includes taxes both directly paid by recycling and reuse establishments and an estimate of those resulting from indirect sources. The study builds upon other regional and state-specific studies produced in the past, including a groundbreaking assessment of the economic impact of recycling in the northeast in 1994. While informative, previous studies used different, inconsistent methodologies, which made it difficult to compare data from state to state. By using one methodology, for the first time, the national study allows for sound comparisons across different regions and states.

¹ <http://www.epa.gov/jtr/econ/rei-rw/about.htm>

APPENDIX 2

Bibliography of Web-Based Resources on Recycling Market Development

For more in-depth information on state priority materials and market development programs, see the following websites. (Note: This bibliography is not designed to be comprehensive, but rather to provide examples of initiatives in select areas and for which web-based resources are available)

Priority Materials

Electronics:

Connecticut: DEP is currently holding computer collection days in several communities, and provides a list of state recyclers and reuse companies, and a factsheet on questions to ask when buying a green computer. See:

<http://www.dep.state.ct.us/wst/recycle/comprecy.htm> and
<http://www.dep.state.ct.us/wst/recycle/computel.htm>.

Florida: For a summary of the state's electronics recycling program, see: <http://www.dep.state.fl.us/dwm/programs/electronics/>. The DEP has published two documents that explain the states CRT management plan: [Florida's Strategy for the Management of End of Life Cathode Ray Tubes \(CRTs\), Computers, and Other Electronic Equipment](#); [Reclaiming End-of-Life Cathode Ray Tubes \(CRTs\) and Electronics: A Florida Update](#). The state has a computer and computer parts recycling contract that is available:

<http://www.dep.state.fl.us/dwm/programs/electronics/default.htm>

Massachusetts: DEP has instituted a disposal ban on CRT's and has a statewide recycling program in place for computer monitors and televisions. Over 60 municipalities receive grants from MA government for computer and CRT recycling. See: <http://www.state.ma.us/dep/recycle/crt/crthome.htm>

Minnesota: OEA is pursuing a product stewardship dialogue with industry, and has partnered with Sony to recycle the company's electronics free of charge using three collection sites. Many counties in the state sponsor collection events. See: <http://www.moea.state.mn.us/plugin/index.cfm>. The Pollution Control Agency released the "Managing Electronic Equipment" factsheet in July 1999, which explains how small businesses in Minnesota should manage end-of-life electronic equipment. This document is available in [PDF format](#).

Wisconsin: In September 1998, the DNR distributed a [factsheet on used computer management](#) alerting businesses and institutions to the hazardous materials in computers, especially monitors, which may make them subject to full hazardous waste regulation unless they are reused or recycled.

Carpet:

The Minnesota Office of Environmental Assistance (OEA), the Wisconsin Department of Natural Resources, the Iowa Department of Natural Resources and the U.S.

Environmental Protection Agency (EPA) are part of a joint project to promote the idea of product stewardship as a method to address carpet in the waste stream. See: <http://www.moea.state.mn.us/policy/carpet/index.cfm>

Market Development Approaches

General:

EPA's Jobs Through Recycling Program: For a comprehensive listing and description of state market development programs, see: <http://www.epa.gov/jtr/state/index.htm>.

Jerry Powell, Editor of Resource Recycling: See *The Changing Environment for Recycling Market Development*, <http://www.epa.gov/jtr/topics/powell.htm>

Northeast Recycling Council: In 1998, NERC published a summary of the future directions for the ten Northeast states' recycling market development programs. See: <http://www.nerc.org/future-download.html>

Product Stewardship and Extended Product Responsibility:

U.S. Environmental Protection Agency: EPA supports extended product responsibility as an approach to encourage sustainable product systems. See: <http://www.epa.gov/epr/index.htm>

Center for Clean Products and Clean Technologies: Housed at the University of Tennessee, the Center focuses on pollution prevention through design and manufacturing processes with the environment in mind. The Center is coordinating a national product stewardship initiative on Electronics. See: <http://eerc.ra.utk.edu/clean/>

Northwest Product Stewardship Council: NWPSC is a group of government agencies and non-profit organizations working together with businesses to integrate product stewardship into the policy and economic structures of the Pacific Northwest. See: <http://www.govlink.org/nwpsc/>

Product Stewardship Institute: PSI was created to assist state and local government agencies in establishing cooperative agreements with industry and environmental groups to reduce the health and environmental impacts from consumer product manufacture, use, storage, and disposal. See http://www.turi.org/product_stewardship/.

Providing Targeted Assistance to Recycling Enterprises:

Northeast Recycling Council: NERC holds regular seminar to train business development specialists to assist recycling enterprises with business plan development and financing. See: <http://www.nerc.org/seminar/index.html>
For a summary of recycling business assistance programs available in the NERC states, see: *Northeast States Recycling Business Assistance Guide*, at <http://www.nerc.org/busassist/busasstguide2001.html>

APPENDIX 2

EPA Jobs Through Recycling (JTR) “Success Stories”

The following summaries highlight the success of EPA's past JTR grant projects. For each grant, the summaries feature program activities; challenges overcome, lessons learned, business success stories, and an assessment of the program's future.

- **Arizona REDA (1994)**
[Adobe Acrobat PDF file](#) (115 KB) | [HTML file](#) | [ASCII file](#) | [About...](#)
The Arizona REDA provided technical and marketing assistance to state recycling businesses, resulting in the development of a state-wide market development study and the first buy-recycled expo in Arizona.
- **Arizona REDA (1996)**
[HTML file](#)
This project focused on developing a sustainable recycling-based industry in target regions of the state where unemployment exceeds 10 percent and incomes fall below 80 percent of the state average. Projects included the development of end-use industries in the Navajo and Hopi nations and a sustainable forest project.
- **California RBAC (1994)**
[HTML file](#) | [About...](#)
The California Integrated Waste Management Board partnered with the University of California at Santa Cruz, the Community Environmental Council, and other organizations to provide targeted financing, process engineering, technical, and regulatory assistance to California's recycling businesses.
- **California (1996)**
[HTML file](#)
This project developed reuse and recycling-based manufacturing job opportunities in Recycling Market Development Zones that have military bases in the process of closure.
- **California (1998)**
[HTML File](#)
Working with a team of service providers, the California Integrated Waste Management Board (CIWMB) is building a new model for recycling—a regional recycling infrastructure in Alameda County. The CIWMB is developing the new infrastructure to achieve aggressive waste reduction goals set by the state.
- **Clean Washington Center (1997)**
[HTML file](#)
Clean Washington Center (CWC) helped an Alaskan entrepreneur, Sandhill Industries, establish a facility that processes post-industrial plate glass into high-value glass tiles. Through the course of the grant, CWC also provided technical and financial assistance to several other small businesses and sponsored best practices workshops on glass, wood, PET, and rubber throughout Idaho, Alaska, and Montana.
- **Colorado (1997)**
[HTML file](#)
Colorado's Recycling Development Incubator assembled a statewide business assistance network, provided grants to exceptional recycling businesses, and co-hosted an investment forum.
- **Delaware REDA (1994)**
[Adobe Acrobat PDF file](#) (76 KB) | [HTML file](#) | [ASCII file](#) | [About...](#)
The REDA is now a permanent position in the Delaware Economic Development Office. The

project will continue its "Green Industries Initiative" to promote the use of recycled materials and waste reduction in the manufacturing sector.

- **Florida RBAC (1996)**

[HTML file](#)

This project created an RBAC to focus on enhancing markets for organics and construction and demolition debris, the state's two largest waste streams. The RBAC works with Enterprise Florida, the state's economic development agency, to assist recycling businesses with their business, technical, and financial needs.

- **Florida RBAC (1999)**

[HTML file](#)

The Florida Recycling Business Assistance Center (RBAC) established a Center for Excellence in Deconstruction in the Southeast to expand the regional deconstruction and reuse infrastructure. The Center for Excellence in Deconstruction's is promoting building deconstruction within the building industry, spreading knowledge of deconstruction to organizations such as the U.S. military and Habitat for Humanity, and increasing the reuse of salvaged materials within the construction industry.

- **Iowa REDA (1994)**

[HTML file](#) | [About...](#)

The Iowa Department of Economic Development and the Iowa Department of Natural Resources collaborated to increase the use of existing economic development networks for recycling business development. The grantees conducted three recycling market assessments and an analysis of the potential expansion of the recycled glass infrastructure in Iowa.

- **Maine MEP**

[HTML file](#)

The Maine Manufacturing Extension Partnership (Maine MEP) implemented an innovative infrastructure development strategy designed for Maine manufacturers. This "next generation" model helps train MEP field staff and economic development specialists from the Maine Department of Economic and Community Development and Maine's Small Business Development Centers to recognize recycling and reuse opportunities and develop resources to improve access to technical information and assist manufacturers with materials exchange opportunities. Demonstration projects showcased this new approach by providing marketing assistance to three Maine manufacturers whose products use secondary materials: wood waste and seafood waste. On-site assessments to identify opportunities for secondary materials use was offered to the wood industry.

- **Maryland REDA (1994)**

[Adobe Acrobat PDF file](#) (85 KB) | [HTML file](#) | [ASCII file](#) | [About...](#)

With the success of this project, the state has made the REDA position permanent within the Division of Business Development. State funding for recycling companies included a \$1 million loan guarantee and more than \$200,000 in employee training grants.

- **Massachusetts DEP (1998)**

The Massachusetts Department of Environmental Protection partnered with the University of Massachusetts to research and test end markets for used TV and computer monitors.

- **Missouri DEP (1998)**

The Missouri Department of Economic Development's Missouri Enterprise Business Assistance Center developed the Create Outlets for Recyclable Material (CORM) project to assist rural manufacturers with recycling industrial wastes that few had attempted to recycle before. The CORM team used surveys and seminars to recruit manufacturers and help them design, produce, and market new recycled-content products.

- **Minnesota RBAC (1994)**

[Adobe Acrobat PDF file](#) (112 KB) | [HTML file](#) | [ASCII file](#) | [About...](#)

The Minnesota Office of Environmental Assistance and its team of commodity specialists worked to increase the use of recycled materials in the wood fiber, plastics, and composites industries.

- **Montana (1996)**
[HTML file](#)
The Montana Department of Environmental Quality initiated three projects to develop local markets for glass and one project to assess barriers and opportunities for expanding into higher-value markets.
- **Nebraska REDA (1994)**
[HTML file](#) | [About...](#)
The REDA collaborated closely with a number of state departments and environmental organizations to pursue recycling business growth and provide technical and financial assistance.
- **Nebraska (1996)**
[HTML file](#)
This project resulted in *Economic Impact of Recycling in Nebraska*, a study which looked at the effects of recycling on the state's economy, assessed the needs for growth in recycling, and measured the capacity of Nebraska's companies to absorb additional recyclable materials.
- **New Hampshire REDA (1995)**
[HTML file](#) | [About...](#)
Through its many partnerships, the REDA formed an extensive network of service providers available to assist recycling businesses, addressed financing and regulatory barriers, and promoted recycling market development to government officials and financial organizations.
- **New Hampshire REDA (1997)**
[HTML file](#)
New Hampshire provided comprehensive business assistance services to recycling companies and promoted its projects and successes to government officials. The program, coordinated by the New Hampshire Department of Resources and Economic Development, also developed a communications network to support recycling businesses.
- **New Jersey (1996)**
[HTML file](#)
This project demonstrated the viability of collecting consumer electronic appliances for demanufacturing. The success of the demonstration project spurred the establishment of at least 6 new electronics recovery businesses in the area.
- **New York RBAC (1994)**
[HTML file](#) | [About...](#)
This project fostered public-private joint ventures to increase paper recovery, reduce the disposal burden of recycled paper mill sludges, develop wood waste reclamation and recycling facilities, develop technologies for recycling durable plastics, and build a more efficient postconsumer plastics recycling infrastructure.
- **North Carolina RBAC (1994)**
[Adobe Acrobat PDF file](#) (157 KB) | [HTML file](#) | [ASCII file](#) | [About...](#)
The RBAC's efforts helped create a common bond between the state's environmental and economic development communities by emphasizing the three tenets of recycling economic development: job creation, capacity creation, and capital formation. The RBAC is regarded as a leader in market development, particularly in the Southeast.
- **North Carolina RBAC (1998)**
The North Carolina Recycling Business Assistance Center partnered with a local community assistance bank to create a dedicated loan fund for recycling businesses. The project offered loans to the recycling industry that would accept a higher level of risk than conventional bank loans. The RBAC also offered technical assistance to loan recipients.

- **Northeast Recycling Council (1995)**

[HTML file](#) | [About...](#)

NERC used this grant to organize the first-ever recycling investment forum, spurring subsequent forums around the country. In addition, the grant supported three Market Opportunity Forums that focused on finding end markets for undeliverable bulk business mail.

- **Ohio REDA (1994)**

[HTML file](#) | [About...](#)

By building on existing resources available statewide, the REDA acted as a catalyst to offer immediate, focused support to manufacturers expanding their use of secondary materials in production. The REDA worked with more than 60 recycling companies and organizations and helped establish public and private partnerships.

- **Oregon REDA (1994)**

[Adobe Acrobat PDF file](#) (119 KB) | [HTML file](#) | [ASCII file](#) | [About...](#)

The REDA augmented the credibility of end-use manufacturing of recyclables in the state, where most attention had been focused on recycling collection. Of the major projects undertaken by the REDA, more than a dozen have reached the point of project commitment and/or implementation.

- **South Carolina (1996)**

[HTML file](#)

The grant supported the 1997 and 1998 Southeast Recycling Investment Forums, which united recycling businesses in need of financial assistance with investors, economic development officials, and recycling industry professionals. The 1997 investment forum spurred approximately \$4 million in capital investments.

- **Southwest Public Recycling Association (1995)**

[HTML file](#) | [About...](#)

This project encouraged recycling and reuse of materials in rural communities in Arizona, Colorado, New Mexico, and Utah. It led to the creation of a JTR steering committee, which worked closely with each state's economic development, natural resource, energy conservation, and recycling agencies to build both local and regional infrastructure for recycling.

- **Texas (1996)**

[HTML file](#)

This project involved developing a database to link Texas manufacturers with sources of recyclables. The grantee was able to gather valuable information on recyclables markets and potential end-users, which it continues to update and make available to interested recyclers in the state.

- **Virginia (1995)**

[HTML file](#) | [About...](#)

This project helped raise interest in Virginia's recycled plastics and mixed paper markets, developed new technology to accommodate these markets, updated the *Virginia Recycling Markets Directory*, and created links between recycling companies and government service providers.

- **West Virginia (1996)**

[HTML file](#)

This project developed composting demonstration projects, established a materials exchange, and provided business assistance to 12 recycling companies, including one business that increased its use of poultry litter and wood waste by 18,000 tons per year.

APPENDIX 3

Sample of other Market Development Programs in US (Not Comprehensive)

Statewide Programs

Connecticut

No formal market development program. DEP Office of Waste Planning and Standards provides basic recycling technical assistance and refers businesses to DEP Ombudsmen for permitting, and Dept. of Economic and Community Development who deals with them as they would any other business.

DEP also promotes buy recycled and tracks market trends.

Funding comes from dedicated recycling trust that will be depleted in 1.5 years. There are 6 staff, although none in market development. They work with an EPP purchasing person in the Department of Administrative Services Purchasing Division.

Contact: Judy Belaval, CT DEP Office of Recycling and Source Reduction, 860-424-3237 judy.belaval@po.state.ct.us

Kansas

Market development program is part of the state's environmental agency. It provides technical and business assistance to recycled product manufacturers, and grants or loans to businesses. It also promotes buy recycled and tracks market trends for various commodities.

Funding comes from a \$1.00/ton fee on solid waste through the state budget. There are three staff people that also administer other recycling programs.

Success is measured primarily through tones diverted and dollars leveraged, although jobs created and retained is also important.

Major partners are the Kansas Business and Industry Recycling Program, Inc. (non-profit business sponsored entity), the Kansas City Dept. of Commerce and Housing, Regional and State small business development centers for technical assistance, KTEC and MAMTEC for financial and technical assistance, and the Kansas State University small Business Environmental Assistance Program and Pollution Prevention staff. Other partners include EPA, NERC, NRC, MACRO, and JTR.

Contact: Kent Foerster, KFOERSTE@KDHE.STATE.KS.US

Missouri

Missouri's market development organization is housed in the Environmental Improvement and Energy Resources Authority, a bond issuing authority that is attached to the state's Dept. of Natural Resources. The program itself is guided by a steering committee comprised of staff from EIERA, the Missouri Dept of Natural Resources, and the Missouri Dept. of Economic Development.

Services provided include technical and business assistance to existing recycled product manufacturers, grants and/or loans to businesses, feedstock conversion assistance, buy recycled education, recycled products directory, business and marketing planning assistance, and more. They also identify opportunities for new product development, and informally track commodity trends and opportunities.

Funding comes from 10% of the state solid waste management fund, not to exceed \$1,000,00.

The program is staffed by one program manager and one secretary. They contract with the University of Missouri Outreach and Extension and Missouri Enterprise for some services.

Success is measured by tons diverted, jobs created, jobs retained, dollars and other resources leveraged by clients.

Major partners include the University of Missouri Outreach and Extension, Missouri Enterprise, Missouri DNR, Missouri DED, and Missouri Recycling Association

Contact: Kristin Allan, Program Manager, 573-526-5555, nrallak@mail.dnr.state.mo.us

South Carolina

South Carolina's recycling market development agency is part of the state's Dept. of Commerce. Services include technical and business assistance to recycled product manufacturers, attraction of new businesses to the state, and business and industry recycling assistance relative to markets and service providers in the state.

The recycling market development agency identifies new products, promotes buy recycled, tracks market trends and opportunities for various commodities, promotes pro-recycling policies and recovery of materials where established markets exist.

Funding comes from Solid Waste Trust Funds which are environmental fees assessed at retail on certain products.

There are 2 staff, a RMD program manager and project manager split between market development and business recycling assistance.

Success is measured by jobs created, investment dollars from recycling businesses, number of clients assisted, and activity and success on RMD projects.

Major partners include the SC Recycling Market Development Advisory Council, the Dept. of Commerce which houses staff (provides no funding), and the Dept of Health and Environmental Control which provides technical support and awards funding from the Trust Fund.

Contact: Ted Campbell, Director, 803-737-0477, tcampbel@teamsc.com

Indiana

Indiana's market development program is part of the state Department of Commerce, Energy and Recycling Office. Services include technical and business assistance to recycled product manufacturers, grants and/or loans to businesses, sponsoring of research into new recycling technologies, and attraction of new businesses. They also promote buy recycled, and track market trends and opportunities for various commodities.

Funding comes from a legislatively established dedicated fund fed by a portion of landfill tipping fees. One person manages the loan and grant funding program, technical assistance programs, buy recycled initiatives, marketing of the program, production of materials and reports, etc. An engineer is shared among other non-RMD programs in the office and does technical review and consultation on recycling projects.

Success is measured by tons diverted, jobs created, and dollars and other resources leveraged by clients.

The state's Dept of Commerce has 12 regional offices that help with outreach and resource dissemination, Local Economic Development Officials provide information for businesses or the community regarding information or funding relating to RMD, and may also suggest to companies ways to reduce waste, recycle, or create a product from recycled materials. They also work closely with local solid waste management districts who are responsible for planning and implementing regional solid waste management programs, other state agencies such as the DEM, Family and Social Services Agency, DNR, etc. In addition, they work with the state recycling organization and other state and local non-profits.

Contact: Tiffany Sorge, Program Manager, 317-233-1951/
tsorge@commerce.state.in.us/

North Carolina

The North Carolina Business Assistance Center is located within the Dept of Environment and Natural Resources, with one staff member with an office in the state Department of Commerce. Services include technical and business assistance to recycled product manufacturers, grants and or loans to businesses (administered through Self-Help), sponsoring research into new recycling technologies, attraction of new businesses, feedstock conversion assistance, maintaining the state's recycling market directory, RBAC newsletter, and other publications, including updated market assessments of 29 different commodities. The Center also promotes buy recycled and tracks market trends and opportunities for various commodities.

Funding comes from the state budget, grants (JTR), and Self-Help, which contributed to funding for the Recycling Loan Fund. There are four staff people: A Manager (financing, regional and national issues), Dept. of Commerce Liaison (specializes in industrial recruitment), Market Development Specialist (electronics, paper, maintaining the Markets Directory), Market Development Specialist (C&D, newsletter development). An Organics Specialist who, although not technically an RBAC staff member, works on many market development projects. Staff members focus on certain commodities, but there is also much collaboration on projects.

Success is measured by tons diverted, jobs created and retained, dollars and other resources leveraged by clients.

Major partners include Self-Help (Loan Fund Management); Department of Commerce: (industrial recruitment and retention). Small Business and Technology Development Centers, (business plans, workshops and courses—RBAC provides scholarships to recycling businesses), Carolina Recycling Association (workshop sponsorship, conference sessions on market development.).

Contact: Matt Ewadinger, matt.ewadinger@ncmail.net

New Hampshire

The New Hampshire Recycling Market Development Program is housed in the state's economic development agency. It provides technical and business assistance to recycled product manufacturers and works to attract new businesses to the state. It also promotes buy recycled and tracks opportunities for various commodities.

Funding comes from the state budget. There is one staff person responsible for day to day operations, technical support for financing, permitting site location and expansion developing new technologies, serving as a clearinghouse for and partnering with others in the state providing information on environmentally responsible practices.

Success is measured by jobs created and retained.

Major partners include a RMD Steering Committee that reviews and revises market development priorities, evaluates the impact of initiatives, etc; GROUPER, recycling professionals (state agencies and NGO's) meets monthly to share activities and collaborate on new projects, and NERC who helps with research and policy perspectives.

Contact: James Robb, 603/271-2591/ jrobb@dred.state.nh.us

Pennsylvania

Pennsylvania's RMD program is located in the state DEP. It provides business assistance to existing recycled product manufacturers, grants and/or loans to businesses, and funding to other state agencies to assist with market development in their areas of expertise—transportation, agriculture, general services. Pennsylvania also identifies new product opportunities, promotes buy recycled, tracks markets trends and opportunities for various commodities, provides funds to other agencies to perform some aspect of market development, and maintains a market directory of recyclers, processors, MRF's, unique recyclers, and recycled product manufacturers.

Funding comes from the state budget as well as landfill tipping fees. There are four staff, one person for composting; one for product stewardship, electronics, special projects, grants and studies; one person to maintain databases and work with businesses and processors, and one supervisor.

Success is measured through tones diverted and recycling economics study.

Major partners are local governments, other state agencies (Agriculture, Transportation, General Services, Community and Economic Development) and the Professional Recyclers of PA (trade organization representing recycling community in PA).

Contact: Georgia Kagle, gkagle@state.pa.us

West Virginia

West Virginia market development program is within the state's environmental agency. They provide technical and business assistance to recycled product manufacturers, as well as grants and/or loans and promote buying recycled.

Funding comes from general revenues from a portion of landfill tipping fees. The office has five staff and success is measured by tons diverted, and jobs created and retained. Major partners are the Department of Natural Resources and the state development office.

Contact: Carol Throckmorton, CTHROCKM@GWMAIL.STATE.WV.US

Ohio

Ohio's market development program is part of the Department of Natural Resources Division of Recycling and Litter Prevention. They provide technical and business assistance to recycled product manufacturers, grants and/or loans, sponsor research into new recycling technologies, attract new recycled product manufacturers, provide assistance in feedstock conversion, and education and awareness on recycling, litter prevention, and source reduction. They also promote buy recycled, track markets and opportunities for various commodities, and fund other agencies to do recycling market development.

Funding comes from a two-tiered corporate franchise tax. They have a staff of 32 {is this for RMD?}.

Success is measured by tons diverted, jobs created, \$ and resources leveraged by clients, and economic impacts.

Contact: Donna Stusek, donna.stusek@dnr.state.oh.us

Colorado

Colorado has no formal RMD program. There is a loan program for recycling businesses located in the state Housing and Finance Authority. The Colorado Department of Local Affairs also runs a tire program that gives partial reimbursement to end users of scrap tires based on quantity of processed tires. The tire fund also provides grants to public entities purchasing products made from scrap tires. The CO Commission on Higher Education gives out grants for research in recycling and various pollution prevention technologies. In the 3 years this program has been running, about \$400,000 has gone to research projects related to recycling. The CO Gov's Office of

Energy Management & Conservation supports rural recycling workshops, has promoted electronics recycling & sponsored some collection events, and helps with the annual recycling conference run by the state recycling organization.

Funding for the above programs comes from a Waste Tire fund, which is funded from a surcharge of \$.75 levied on each scrap tire left behind in a tire shop (not point of sale). The CHFA loan fund was started through Waste Tire moneys but is now a self-funded revolving loan program.

There are no recycling market development staff in the state.

Contact: Anne Peters, Board Member, Colorado Association for Recycling,
303.494.4934 / annep@indra.com

New York

New York State's recycling market development program is within the Environmental Services Unit in the state's economic development agency. It provides technical and business assistance to recycled product manufacturers, grants and/or loans, sponsors research into new recycling technologies, attracts new businesses, and provides assistance in feedstock conversion. The Unit also provides information on markets and trends, P2 technical assistance and grants for businesses, is the clean air act ombudsman liaison between government agencies and businesses, promotes buy recycled, tracks market trends, provides funding to other agencies working on recycling market development, and partners with service providers to provide P2 and source reduction assistance to businesses.

Funding for salaries comes from the state budget. Program funding comes from the NYS Environmental Protection Fund, a dedicated fund created primarily from real estate transfer taxes and fees to support environmental improvements and initiatives in NYS; and from State Revenue Funds from the Clean Air Act Program).

There are ten staff people, including a director, loan/grant administrator, secretary, and 7 FTE professional service providers. Other service providers from MEP and consultants are contracted with as needed.

Success is measured by tons diverted, jobs created and retained, dollars and other resources leveraged by clients, dollars saved on avoided waste management, dollars saved on avoided purchase costs, dollars earned from new revenues/sales of recycled products. P2 accomplishments are measured in terms of amount of material generation avoided.

Partners include the State Dept. of Environmental Conservation's Bureau of Waste Reduction & Recycling (collection, education); NYS Office of General Services (procurement/end use); Manufacturing Extension Partnership (tech assistance waste audits in the manufacturing sector); NYS Energy Research & Development Authority (innovative research, energy efficiency, waste-to-energy); etc. Partners for other functions, such as Clean Air Act clients, include the NYS Environmental Facilities Corp., and State Dept. of Environmental Conservation's Bureau of Air.

Contact: Brenda Grober, bgrober@empire.state.ny.us / (518) 292-5342

Massachusetts

Massachusetts recycling market development office is the Chelsea Center for Recycling and Economic Development. The Chelsea Center is organizationally part of the University of Massachusetts, although it is physically not located on campus. The Chelsea Center provides technical and business assistance to existing recycled product manufacturers, business assistance to existing recycled product manufacturers, grants to businesses, including grants for independent testing of products and feedstocks, sponsors research into new recycling technologies, attracts businesses to the state, provides assistance in feedstock conversion, and provides interns to companies. The Chelsea Center also identifies new product opportunities, promotes buy recycled, tracks opportunities for various commodities, provides grants to communities and community based organizations to identify and implement programs to turn local wastes into local economic development benefit, and publishes a newsletter, technical reports and other results of funded projects, a directory of recycled product manufacturers, a directory of business and technical service providers in the state, and a directory of national testing labs for the recycling industry.

Until June 30, 2003, funding from the Chelsea Center comes from the Strategic Envirotechnology Partnership, part of state budget through the university. This funding covers three staff and most of the office overhead. Program funds and funds for an additional two staff come from the Executive Office of Environmental Affairs from the Clean Environment Fund, comprised of unredeemed bottle deposits.

Until September 2002, staff of five: Executive Director (overall strategy and direction); Director of Technical Programs (R&D, technology, product development and testing); Director of Business Programs (support for existing manufacturers); Director of Economic Development Programs (recycling-based community economic development projects, new business attraction); Office Manager (general administration, coordination, and some program management).

Success is measured by tons diverted, jobs created, jobs retained, dollars and other resources leveraged by clients.

Major partners are the University - operating expense funder and provides ready access to a pool of researchers and students to work on technical/technological and business planning aspects; Executive Office of Environmental Affairs/Department of Environmental Protection - staff and program funder - sets goals for the use of their funds and collaborates in setting market development priorities; Communities and non-profits - provide the venue and the ideas for supporting recycling-based economic development projects; Manufacturers - provide the markets for secondary materials and also participate in the Re-Made in Massachusetts Alliance - network of recycled content product manufacturers; various business and technical service providers throughout the state. Given the small staff at the Center, priority has been towards building partnerships with other business service providers rather than replicate services.

As of June 30, 2003 it is anticipated that state funding for the Chelsea Center will end and the Center will close its doors.

Contact: Michael Dimino, 617-887-2300, michaeld@chelseacenter.org

County and Regional

Portland, Oregon Metro

Metro is a regional service district serving three counties that runs facilities and develops/regulates infrastructure, with RMD as part of the Solid Waste and Recycling Department. Metro defines market development as improved demand AND supply. Metro has provided technical and business assistance and loans in the past, but mostly focuses on providing information, regulation and financial support to increase supply quantity/quality and demand for commodities and products. Metro also identifies new products, promotes buy recycled, tracks market trends and opportunities for various commodities, provides funding to other agencies to perform some aspect of recycling market development, develops demonstration projects for use of compost in erosion control, monitors residual levels in processed recyclables, underwrites local jurisdiction technical assistance for business waste reduction and buy-recycled promotion, grants funds to new and existing facilities that compost food wastes and MRF C&D wastes, buys equipment for and provides outreach and education on behalf of agencies that recover food for human consumption, provides technical assistance to lending institutions. Metro ran a loan program which is about to go defunct due to lack of qualified applicants.

Funding comes from a Regional Service Fee it charges on every ton of MSW disposed. Metro has a staff of 20 that work on various aspects of recycling. The Recycling Market Development Coordinator position is being cut from the budget due to the demise of the loan program and the agency's focus on material-specific aspects of market development.

Success is measured by tons diverted, per capita disposal, cost per ton diverted, number of calls answered, number of visitors to web sites, surveyed satisfaction levels.

Major partners include Local governments, including cities and counties. Partnerships have been forged with Oregon Economic and Community Development Department, Portland Development Commission, local public school systems and local banks. Metro interacts closely and regularly with the business community and with haulers, processors and end users, through advisory committees and other meetings.

Contact: Steve Engel, Recycling Market Development Coordinator, 503-797-1535, engels@metro.dst.or.us

Ventura County, CA

Ventura County's RMD program is located in the County Environmental and Energy Resources Department. It provides technical and business assistance to recycled product manufacturers, grants and loans to businesses, attracts new businesses, and provides assistance on feedstock conversion. It also promotes buying recycled and tracks opportunities for various commodities.

Funding comes from the state as well as from local refuse hauling surcharges and fees. There is one staff person.

Success is measured by tons diverted, money and other resources leveraged by clients, and number and amount of loans. The major partners are economic development agencies.

Contact: David Goldstein, 805-289-3337 /
DAVID.GOLDSTEIN@MAIL.CO.VENTURA.CA.US